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| EXAMINER |
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LIN, WEN TAI

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| ART UNIT | PAPER NUMBER |
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2154

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| NOTIFICATION DATE | DELIVERY MODE |
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08/27/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/518,553

Applicant(s)

ENQVIST, JUHANA

Examiner

Wen-Tai Lin

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 and 15-52 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. Claims 1-52 are presented for examination.
2. The abstract is objected to because it fails to comply with the requirement that the abstract be started on a new page and contained within one paragraph (see MPEP 608.01(b)).
3. The drawings are objected to because several parts of Figs. 4-5 are not legible. Submitting clearer copies replacing Figs. 4-5 in response to this office action is required.
4. Claim 32 is objected to because the phrase "such as" renders the scope of the claim indefinite. It is further noted that the phrase "and/or" in claim 32 also raises the issue of indefiniteness and is being interpreted as "or".
5. Claims 14 and 30 are objected to because the words "mark" in claim 14 and "analyzing" in claim 30 appear to be typos of "marked" and "analyzing", respectively.
6. Claims 11, 17, 25-26, 29, 35 and 42-52 are objected to because the following terms lack antecedent basis:

in claim 11: "the same one buffer";

in claim 29: "the handling process";
in claim 50: "the subsequent node";
in claim 50: "the preceding node";
in claim 17: "the auxiliary self-contained component";
in claim 42: "the node components";
in claim 25-26: "the same buffer"; and
in claim 35: "the processing chain".

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3, 5, 15-23 and 42-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blott et al.(hereafter "Blott")[U.S. Pat. No. 6449618] in view of Official Notice .

9. Blott is cited from Applicant's IDS.

Art Unit: 2154

10. As to claim 1, Blott teaches the invention substantially as claimed including: a method for mediating event records between a generation layer of events [e.g., 16, Fig.1] and an operation system layer of events [e.g., 18, Fig.1] in a communications network by means of a mediation layer of events [e.g., 12, Fig.1; 100, Fig.11], which includes at least one first self-contained component [e.g., 60-1, Fig. 3 or 110, Fig. 11] of the mediation layer and at least one second self-contained component [e.g., RAE-1, Fig.3 or 104-1, ..., 104-k, Fig.11] of the mediation layer, which operates independently of each first component of the mediation layer and at least one buffer [col.16, lines 24-46], the method comprising:

collecting event records from an element of the generation layer of events substantially continuously as a stream [e.g., input streams, output streams, Fig.2], by the at least one first self-contained component of the mediation layer, processing the collected event records substantially continuously [e.g., col.7, lines 29-48; col.13, lines 41- 65], wherein the step of processing includes:

Blott teaches that the at least one first self-contained component transfers data to the at least one second self-contained component substantially as continuous streams. Blott is silent about the feature that data is transferred through at least one buffer interfaced between the first and second self-contained components.

However, Official Notice is taken that using a buffer to interface two asynchronously operated modules for data transferring in between is well known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to place a buffer between Blott's data collection/mapper element (e.g., 60-1, Fig.3 or 110, Fig.11) and any of the RAE elements (e.g., RAE-1, Fig.3 or 104-1, ..., 104-k, Fig.11) because it enables data transferring in between to be paced in accordance with the processing rate in each of the self-contained asynchronous elements [note that similar buffering stage is implemented between the input stream and the data collector/mapper at col.16, lines 24-35].

11. As to claims 2-3, Blott further teaches that at least part of the step of processing event records is performed by at least one first self-contained component of the mediation layer and at least part of the step of processing event records is performed by at least one second self-contained component of the mediation layer [e.g., 60-1, 66-1, Figs.3 and 11; col.7, lines 29-52].

12. As to claim 5, Blott further teaches that at least two different hosts are used such that at least one of the self-contained components of the mediation layer runs in a first host and at least one of the other self-contained components runs in another host [e.g., col.7, lines 9-28; i.e., each module of Fig.3 has its own CPU and memory].

13. As to claim 15, Blott further teaches that the method further comprises the steps of monitoring by a monitoring system [e.g., a recovery manager] the operation of the self-contained components of the mediation layer and, in case of failure of any of the

self-contained components, automatically setting up a new self-contained component to replace the failed component [e.g., col.8, lines 10-14; col.26, lines 33-44].

14. As to claim 16, Blott further teaches that the method comprises the steps of monitoring by a monitoring system the production capacity of the self-contained components of the mediation layer and, in case of insufficient production capacity of any of the self-contained components, automatically setting up an auxiliary self-contained component parallel to the self-contained component with insufficient production capacity [e.g., col.7, lines 25-28; col. 32, lines 2-15].

15. As to claim 17, Blott further teaches that the auxiliary self-contained component is set up to run in a host different to the host in which the self-contained component with insufficient production capacity runs [e.g., col. 7, lines 29-48; i.e., all RAEs have their own CPUs and are located at different sites, this is an indication that each RAE may be operated under different host].

16. As to claim 18, Blott teaches that the method further comprises the steps of receiving event records from the step of collecting in a source system format, converting the received event records into a mediation layer format, supplying the collected event records to the step of processing in the mediation layer format, receiving the processed event records from the step of processing in the mediation layer format, converting the processed event records into an operation system layer format, and supplying the

processed event records to the step of delivering in the operation system layer format [e.g., col.21 line 48 – col.22 line 26].

17. As to claim 19, Blott further teaches that the step of processing event records comprises at least one of the following:

validating and analysing event records, enrichment of event records, aggregation and correlation of event records, formatting of event records and rating [e.g., col.4, lines 4-8; col. 32, lines 1-41].

18. As to claim 20, A Blott further teaches that each of the self-contained components operates independently and continuously once started [e.g., col.7, lines 29-31; i.e., a “sharednothing” approach makes the RAEs running indepenedently among themselves].

19. As to claim 21, Blott further teaches that the method comprises steps of stopping the operation of a self-contained component by the self-contained component itself, and performing said step of stopping the operation by the self-contained component only if instructed so by a manager component of the mediation layer [e.g., col.2, lines 19-21; col.28, lines 60-62].

20. As to claim 22, Blott further teaches that the method comprises the steps of providing each of the self-contained components with its own individual settings, and

each of the self-contained components functioning according to its own individual settings [e.g., col. 22, lines 49- 61; note that since each cluster/RAE may be configured to deal with dynamic customer need, it must be configured differently].

21. As to claim 23, Blott does not specifically teach that said individual settings of each of the self-contained components include a node base part of the settings, which is identical to the node base parts of the other self-contained components within the mediation layer, and a node application part of the settings, which contain custom processing rules and which is different to the node application parts of at least most of the other self-contained components within the mediation layer.

However, template as basis for individual configuration file is well known in the art. Furthermore, Blott teaches that certain configuration data (such as rate table) may be replicated across different RAEs. On the other hand, the RAEs in each cluster are also adapted to customer's needs [e.g., col. 9, lines 12-18; col. 22, lines 49-61].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to keep configuration templates in a database node that is accessible to all the self-contained components because the approach speeds up the configuration of settings that are common to all the self-contained components.

22. As to claims 42-52, since the features of these claims can also be found in claims 1-3, 5 and 15-23, they are rejected for the same reasons set forth in the rejection of claims 1-3, 5 and 15-23 above.

23. Claims 4, 6-12 and 24-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blott et al.(hereafter "Blott")[U.S. Pat. No. 6449618], as applied to claims 1-3, 5 and 15-52 above and Official Notice , as applied to claims 1-3, 5 and 15-52 above, further in view of Krishnamurthy et al.(hereafter "Krishnamurthy")[U.S. Pat. No. 6421676].

24. As to claim 4, Blott does not specifically teach at least part of the step of processing event records is performed by at least one third self-contained component of the mediation layer that operates independently of the other self-contained components of the mediation layer.

However, in order to speed up the processing speed it is well known in the art that some task may be further partitioned and mapped onto different pieces of hardware for simultaneous execution of the partitioned tasks. For example, in the area of data collection Krishnamurthy teaches a method of collecting widely spread data sources such that data sources are collected and packed locally and passed up to higher hierarchical stages (e.g., Fig. 1A and 4A). Further, in Blott's Fig. 11 data collection and mapping (see 110, Fig.11) activities are grouped into one unit, while in Blott's Fig. 3, the mapping is singled out as an independent activity (see 60-1, 60-2, Fig.3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to partition Blott's data collection/mapping unit into data collection (calling it a first self-contained component) and mapping (calling it a third self-contained

component) stages because the split tasks are more tuned to the self-contained components and such further improvement is obvious and predictable in resolving the front-end processing bottleneck of Blott's system [col.8, lines 6-24].

25. As to claims 6-7, Blott and Krishnamurthy further teaches that the steps of delivering event records from each of the first self-contained components of the mediation layer to the at least one third self-contained component of the mediation layer via at least one buffer, and delivering event records from the third self-contained components of the mediation layer to one of the at least one second self-contained component of the mediation layer via at least one buffer [see Fig.3 and the reasons presented at the rejection of claim 4].

26. As to claim 8, since the features of this claim can also be found in claims 1 and 7, it is rejected for the same reasons set forth in the rejection of claims 1 and 7 above.

27. As to claim 10, Blott and Krishnamurthy teach that the preceding self-contained component of the mediation layer outputs event records into the buffer grouped into small groups of event records, and the subsequent self-contained component of the mediation layer reads event records from the buffer in small groups of event records [e.g., Krishnamurthy: col.7 lines 39-50; 408, Fig.4A].

28. As to claims 11-12, Blott teaches that at least two separate self-contained components of the mediation layer write event records into the same one buffer [e.g., the two mappers 60-1 and 60-2 of Fig. 3 may write data into the same buffer interfacing any of the subsequent RAE [e.g., col.7, lines 50-60; i.e., more than one mappers may be written into a same RAE of Fig.3]. Similarly, two different RAEs may read data from the same mapper of Fig.3 via a same buffer interfacing the mapper [e.g., col. 32, 16-20].

29. As to claims 9 and 24-41, since the features of this claim can also be found in claims 1-12 and 15-23, it is rejected for the same reasons set forth in the rejection of claims 1-12 and 15-23 above.

As for the limitation in claim 30 requiring at least two audit trail counters for counting auditing values: Blott teaches that individual processed-event records are typically sent to the DW/ES 14 for archiving. Archived data may be used later for non-real-time tasks, such as auditing, data mining, and reprocessing (e.g., if all processing cannot be performed when the event occurs) [col.3, lines 34-40; col. 18, lines 17-23].

30. Claims 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2154

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Swarna et al. [U.S. PGPub 20040006608];

Pillai et al. [U.S. PGPub 20030133552]; and

Bullard et al. [U.S. Pat. No. 6405251].

32. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 days from the mail date of this letter. Failure to respond within the period for response will result in ABANDONMENT of the application (see 35 U.S.C. 133, M.P.E.P. 710.02, 710.02(b)).

Conclusion

Examiner note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant.

Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (571)272-3969. The examiner can normally be reached on Monday-Friday(8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

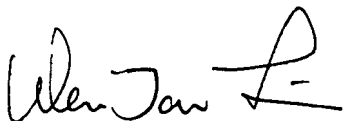
(571) 273-8300 for official communications; and

(571) 273-3969 for status inquires draft communication.

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Wen-Tai Lin

August 19, 2007

 8/19/07